Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method for identifying a display molecule of a bifunctional complex further comprising an identifier oligonucleotide linked to the display molecule, said method comprising the steps of

i) separating complementary single stranded identifier oligonucleotides from an enriched and partitioned fraction of bifunctional complexes having an affinity for a target molecule, said bifunctional complexes comprising a duplex identifier oligonucleotide comprising said complementary single stranded identifier oligonucleotides,

ii) hybridising the single stranded identifier oligonucleotides obtained in step i), thereby generating a composition comprising homo-duplex identifier oligonucleotides and hetero-duplex identifier oligonucleotides, wherein homo-duplex identifier oligonucleotides hybridise without

generating any mis-matches between the complementary oligonucleotide strands, and wherein one or more mis-matches are present when complementary identifier oligonucleotides form hetero-duplexes,

iii) separating homo-duplexes from hetero-duplexes,

iv) obtaining a fraction comprising predominantly homo-duplexes,

v) decoding the identifier oligonucleotides of the homo-duplexes, and

vi) identifying based on the decoding in step v) the one or more display molecules identifier by the decoded identifier oligonucleotides.

2. (Original) The method of claim 1, wherein the duplex identifier oligonucleotide comprising complementary single stranded identifier oligonucleotides is obtained by hybridisation of a complementary identifier oligonucleotide with the identifier oligonucleotide linked to the display molecule of the bifunctional complex.

3. (Original) The method of claim 1, wherein the duplex identifier oligonucleotide comprising

complementary single stranded identifier oligonucleotides is obtained by hybridising a probe oligonucleotide with the identifier oligonucleotide of the bifunctional complex, enzymatically extending said probe oligonucleotide, thereby obtaining a complementary identifier oligonucleotide hybridised with the identifier oligonucleotide linked to the display of the bifunctional complex.

4. (Original) The method of any of claims 2 and 3, wherein said duplex identifier oligonucleotide comprising complementary single stranded identifier oligonucleotides is obtained prior to, during or concomitantly with the step of partitioning the bifunctional complexes.

5. (Original) The method of any of claims 2 and 3, wherein said duplex identifier oligonucleotide comprising complementary single stranded identifier oligonucleotides is obtained after the step of partitioning the bifunctional complexes.

6. (Original) The method of claim 1, wherein the identifier oligonucleotide linked to the display molecule is selected from the group consisting of a) a single

stranded identifier oligonucleotide and b) a duplex identifier oligonucleotide comprising complementary single stranded identifier oligonucleotides, said method comprising the preliminary steps of

i) providing a composition of bifunctional complexes comprising different display molecules,

ii) providing one or more target molecule(s) having an affinity for one or more of said display molecules,

iii) contacting the composition of bifunctional complexes provided in step i) with the target molecule provided in step ii)

iv) obtaining an enriched fraction of bifunctional complexes comprising one or more display molecules having an affinity for said target molecule,

v) partitioning said enriched fraction obtained in step iv) from bifunctional complexes not having an affinity for said target molecule, and

vi) complementing single stranded identifier oligonucleotides of different bifunctional complexes in which the display molecule is linked to a) a single stranded identifier oligonucleotide, thereby obtaining a duplex identifier oligonucleotide comprising complementary identifier oligonucleotides, with the

proviso that no single stranded complementation occurs for bifunctional complexes comprising b) duplex identifier oligonucleotides comprising complementary identifier oligonucleotides.

7. (Original) The method of claim 6 wherein the display molecule of a bifunctional complex provided in step i) or obtained in step iv) is linked to a single stranded identifier oligonucleotide, said method comprising the further step of complementing said single stranded identifier oligonucleotides of the different bifunctional complexes, thereby obtaining a duplex identifier oligonucleotide comprising complementary identifier oligonucleotides.

8. (Original) The method of claim 7, wherein said single stranded identifier oligonucleotides of the different bifunctional complexes are complemented prior to partitioning of the bifunctional complexes.

9. (Original) The method of claim 7, wherein said single stranded identifier oligonucleotides of the different bifunctional complexes are complemented after partitioning of the bifunctional complexes.

10. (Original) The method of claim 7, wherein said single stranded identifier oligonucleotides of the different bifunctional complexes are complemented during or concomitantly with the partitioning of the bifunctional complexes.

11. (Currently Amended) The method of ~~any of claims~~ claim 7 ~~to 10~~, wherein the complementation of the single stranded identifier oligonucleotides comprises the steps of hybridising one or more oligonucleotide probe(s) to the single stranded identifier oligonucleotide of at least some of the bifunctional complexes, and ligating and/or extending enzymatically said probe(s), thereby generating a duplex identifier oligonucleotide comprising complementary oligonucleotide strands.

12. (Currently Amended) The method of ~~any of claims~~ claim 7 ~~to 10~~, wherein the complementation of the single stranded identifier oligonucleotides comprises the step of hybridising a complementary identifier oligonucleotide to the single stranded identifier oligonucleotide of at least some of the bifunctional complexes.

13. (Currently Amended) The method of ~~any of claims~~ claim 1 ~~to 7~~, wherein the display molecule of at least some of the bifunctional complexes are linked to duplex identifier oligonucleotides comprising complementary oligonucleotide strands.

14. (Currently Amended) The method of ~~any of claims~~ claim 1 ~~to 13~~, wherein hetero-duplexes are selectively removed or eliminated from the composition comprising homo-duplex identifier oligonucleotides and hetero-duplex identifier oligonucleotides.

15. (Original) The method of claim 14, wherein the hetero-duplexes are removed by enzymatically degrading the mis-matched, single stranded part of the hetero-duplexes.

16. (Original) The method of claim 15, wherein the enzyme comprises nuclease activity or consists of polypeptide having nuclease activity.

17. (Original) The method of any of claims 15 and 16, wherein the enzyme is selected from the group of enzymes consisting of T4 endonuclease VII, T4

endonuclease I, CEL I, nuclease S1, including variants and combinations thereof.

18. (Original) The method of any of claims 15 and 16, wherein the enzyme is thermostable.

19-55. Cancelled

56. (Currently Amended) The method of ~~any of claims~~ claim 1 ~~to 55~~, wherein at least one of the complementary identifier oligonucleotides of the recovered homo-duplexes is amplified prior to the step of decoding the identity of the display molecule.

57. (Currently Amended) The method of ~~any of claims~~ claim 1 ~~to 56~~, wherein the partitioned fraction of identifier oligonucleotides is amplified by PCR.

58. (Original) The method of claim 57, wherein the identifier oligonucleotides are proportionally amplified.

59. (Currently Amended) The method of ~~any of claims~~ claim 1 ~~to 58~~, wherein the complementary identifier oligonucleotide strands of homo-duplexes and hetero-

duplexes in the fraction comprising predominantly homo-duplexes are separated and allowed to hybridise, said hybridisation resulting in a further fraction comprising predominantly homo-duplexes.

60. (Original) The method of claim 59, wherein the complementary identifier oligonucleotide strands of homo-duplexes and hetero-duplexes in the fraction comprising predominantly homo-duplexes are amplified before being re-hybridised.

61. (Currently Amended) The method of ~~any of claims~~ claim 59 ~~and 60~~, wherein the identifier oligonucleotides are decoded before being re-hybridised.

62. (Original) The method of claim 61, wherein the decoding of the identifier oligonucleotides is used to eliminate a subset of identifier oligonucleotides before the step of re-hybridisation.